



#11/Reply Brief
Hawkins
2/26/03
PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q67313

TANAKA, Toshinori, et al.

Appln. No.: 09/987,374

Group Art Unit: 2834

Confirmation No.: 6921

Examiner: Perez, G.

Filed: November 14, 2001

For: ARMATURE FOR A DYNAMO-ELECTRIC MACHINE

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REPLY BRIEF PURSUANT TO 37 C.F.R. § 1.193(b)

Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the provisions of 37 C.F.R. § 1.193(b), Appellant respectfully submits this Reply Brief in response to the Examiner's Answer dated December 18, 2002. Entry of this Reply Brief is respectfully requested.

POINTS RAISED IN EXAMINER'S ANSWER

The Examiner maintains the §103 rejections for reasons similar to those set forth in the Office Action (Paper No. 7) dated April 24, 2002. Appellant would like to address the following new or clarified points noted in the Examiner's Answer.

1. The Examiner alleges that since Appellant's claims 1-5 are device claims, "no patentable weight has been given to the method of manufacturing limitations (i.e., "a plurality of coil portions are formed simultaneously")." (see Examiner's Answer, *section 11, Response to Arguments*, ¶¶ 4, 5, 9-13).

2. The Examiner alleges that “Baldwin discloses coil portions being formed simultaneously by first placing multiplex winding (two winding paths or more) on a first number of slots of the armature.” (see Examiner’s Answer, *section 11, Response to Arguments*, ¶6).

Appellant replies as follows:

1. Appellant’s independent claim 1-3 define an armature for a dynamo-electric machine comprising a unique combination of features including, *inter alia*, “a core ... having a plurality of slots”, “a coil comprising a plurality of coil portions formed by simultaneously winding wires a plurality of turns around a pair of said slots separated by a predetermined number of said slots and offsetting each of said coil portions in the circumferential direction of said core”, “a commutator” and “a plurality of equalizing connectors” (*Id.*). Even if, assuming *arguendo*, the recitation “formed by simultaneously winding wires a plurality of turns” is construed as a “product-by-process” limitation, this limitation further defines unique structural attributes of the claimed dynamo-electric machine and should be given patentable weight.

MPEP 2173.05(p) explicitly states that, “[a] product by process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper” (*Id.*, citing *In re Luck*, 476 F.2d 650, 177 USPQ 523 (CCPA 1973); *In re Pilkington*, 411 F.2d 1354, 162 USPQ 145 (CCPA 1969); *In re Stepan*, 394 F.2d 1013, 156 USPQ 143 (CCPA 1967)). In the present case, a person skilled in the art of dynamo-electric machines would readily appreciate that the structure of the coil having coil portions formed by “winding wires a plurality of turns around a pair of said slots separated by a predetermined number of said slots

and offsetting each of said coil portions in the circumferential direction of said core” according to claims 1-3, is very different from the structure of a coil where, for example, the coil portions are formed without the “pair of said slots” being separated by a predetermined number of slots. In fact, Baldwin (cited by the Examiner) make it very clear that one of the distinguishing features of dynamo-electric machines is the structure of the armature winding, and that the structure of the armature winding is defined by the process by which it is made, e.g., “lap winding”, “wave winding”, “multiplex winding”, etc. (*see Id.*, col. 1, lines 5-55)

Indeed, the Examiner does give patentable weight to the limitation “winding wires a plurality of turns around a pair of said slots separated by a predetermined number of said slots and offsetting each of said coil portions in the circumferential direction of said core” when alleging that Aoki discloses this feature.

Yet, the Examiner refuses to give patentable weight to a further limitation of “simultaneously winding wires ...”, as required by claims 1, citing *In re Thorpe*, 777 F.2d 695,698,227 USPQ 964,966 (Fed. Cir. 1985). Appellant respectfully submits that the Examiner has misinterpreted *In re Thorpe*. In particular, *In re Thorpe* does not stand for the proposition that “no patentable weight [is to be] given to the method of manufacturing limitations,” as proposed by the Examiner. Instead, as outlined in MPEP 2113, *In re Thorpe* recognizes that product by process claims are limited by and defined by the process, and that it is only “[i]f the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable” (*Id. citing In re Thorpe*). Nowhere has it been held that no patentable weight is to be given to method of manufacturing limitations in product claims.

Indeed, it is only after the Examiner has provided a rationale tending to show that the claimed product appears to be the same as, or similar to, that of the prior art, although produced by a different process, that the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art” (*see Id. citing In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289,292 (Fed. Cir. 1983)).

In the present case, the Examiner does not even attempt to rationalize how the coil formed by simultaneously winding wires (as shown, for example, in Appellant’s Figs. 2 and 3) is the same as, or similar to, any of the coils disclosed by the prior art (as shown, for example, in Aoki’s Figs. 1, 2 and 5, and Baldwin’s Fig. 1). While Appellant acknowledges that “[t]he Patent office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims” (*Id. citing In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324,326 (CCPA 1974), the Examiner has not provided any rationale with regard to the feature of “coil portions formed by simultaneously winding” Instead, the Examiner simply makes an unsupported conclusory statement that “[c]oils being formed simultaneously is one method by which the coils arrangement may be manufactured, but the claimed end product is not different from the end product in the prior art” (see Examiner’s Answer, *section 11, Response to Arguments*, ¶5). In fact, the Examiner does not have any rationale to justify such a conclusion, because, as noted above, even in the prior art cited by the Examiner it is acknowledged that artisans skilled in the art of dynamo-electric machines would appreciate that one of the distinguishing characteristics of such machines is the structure of the coil which is in turn

defined by how the wires forming the coil are wound (*see e.g.*, Baldwin col. 1, lines 5-55).

Thus, Appellant submits that the Examiner has not made out a case of *prima facie* obviousness.

In summary, if no reasonable combination of Aoki, Baldwin and Rabe discloses, teaches or suggests a dynamo-electric machine comprising the unique combination of features including, *inter alia*, “a coil comprising a plurality of coil portions formed by simultaneously winding wires ...” and “a plurality of equalizing connectors”, then claims 1-3, as well as the dependent 4 and 5 would not have been obvious under 35 U.S.C. §103.

2. The Examiner alleges, for the first time, that Baldwin discloses “coil portions being formed simultaneously”. However, this allegation is not supported by Baldwin’s actual disclosure.

In particular, in col. 1, lines 41-55, cited by the Examiner, Baldwin describes a conventional method known as “multiplex winding.” According to this method, “[i]n order to increase the capacity of the machine, two or more winding paths in parallel are provided, i.e., two or more simplex windings are placed on the same armature.” (*Id.*) That is, as would be appreciated by an artisan skilled in the art of dynamo-electric machines, multiplex winding increases the capacity of dynamo-electric machines by providing two electrically parallel windings.

Nowhere does Baldwin disclose, teach or suggest that multiplex winding means that its coil portions 9-22 are formed by simultaneously winding wires a plurality of turns around a pair

of slots separated by a predetermined number of slots and offsetting each of the coil portions in the circumferential direction of the core. In fact, Baldwin discloses that in a multiplex winding the two simplex windings are formed sequentially, not simultaneously:

assume an armature having 100 core slots ..., a simplex lap winding would be placed on the armature by using 50 alternate core slots ..., this winding closing upon itself. A second simplex lap winding exactly like the first would be placed in the remaining 50 slots A multiplex winding is constructed in exactly the same way. (*Id.*, col. 1, lines 46-55)

Thus, contrary to the Examiner's analysis, Baldwin discloses nothing more than coils formed by conventional winding methods, and does not disclose, teach or suggest coils formed by simultaneously winding wires, as required by Appellant's claims 1-3.

CONCLUSION

For the above reasons as well as the reasons set forth in Appellant's Brief on Appeal, Appellant respectfully requests that the Board reverse the Examiner's rejections of all claims on Appeal. An early and favorable decision on the merits of this Appeal is respectfully requested.

Respectfully submitted,



Stan Torgovitsky
Registration No. 43,958

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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